

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1. (cancelled)

2. (currently amended) ~~The stator assembly of claim 1 wherein, A~~
stator assembly, comprising:

a housing;

a flux ring disposed within the housing, the flux ring including includes
anchors extending radially inward;

~~with the plurality of a plurality of permanent magnets disposed around an~~
~~inner surface of the flux ring between the anchors and the overmolded material~~
~~also overmolded around the anchors; and~~

a material overmolded around the plurality of magnets and the anchors to
secure the magnets to the flux ring and to secure the flux ring to the housing.

3. (currently amended) ~~The stator assembly of claim 1 wherein, A~~
stator assembly, comprising:

a housing;

a flux ring disposed within the housing;

a plurality of permanent magnets disposed around an inner surface of the
flux ring;

a material overmolded around the plurality of magnets to secure the magnets to the flux ring and to secure the flux ring to the housing; and

wherein the flux ring includes including a seam that allows the flux ring to be compressed for insertion into the housing during assembly, the overmold material expanding the flux ring against the housing.

4. (original) The stator assembly of claim 3 wherein the seam of the flux ring is filled with the overmold material during molding of the overmold material, the overmold material upon hardening preventing the flux ring from compressing.

5. (original) The stator assembly of claim 3 wherein the stator assembly has a plurality of magnetic poles, the seam of the flux ring aligned with one of the magnetic poles.

6. (original) The stator assembly of claim 3, wherein one of the flux ring and the housing includes at least one projection and the other of the flux ring and the housing includes at least one hole, the projection being received in the hole to align the flux ring in the housing.

7. (original) The stator assembly of claim 6, wherein the projection and hole of the flux ring and housing are disposed about ninety degrees from the seam of the flux ring.

8. (currently amended) The stator assembly of claim 13, further including at least one of a rear bearing support, front bearing support and fan baffle integrally formed of the overmold material during molding of the overmold material.

9. (currently amended) The stator assembly of claim 13, further including a rear bearing support integrally formed of the overmold material during molding of the overmold material, the rear bearing support including a cap having a pocket therein for receiving a rear bearing.

10. (currently amended) The stator assembly of claim 12, wherein the overmold material is a plastic.

11. (currently amended) ~~The stator assembly of claim 1, A stator assembly, comprising:~~
~~a housing;~~
~~a flux ring disposed within the housing;~~
~~a plurality of permanent magnets disposed around an inner surface of the flux ring; and~~
~~a material overmolded around the plurality of magnets to secure the magnets to the flux ring and to secure the flux ring to the housing wherein at least one keying feature is formed in the overmold material between magnetic poles of the stator assembly.~~

12. (original) The stator assembly of claim 11 wherein the keying feature includes slots formed in the overmold material between the magnetic poles with widths of at least two of the slots being different.

13. (currently amended) The stator assembly of claim 12, wherein the plurality of magnets includes four magnets, the stator assembly having a first magnetic pole defined by two of the magnets that are adjacent to each other and a second magnetic pole defined by the other two of the magnets that are adjacent to each other, the overmold material molded to have a first slot between the magnets of the first and second magnetic poles on a first side of the flux ring and a second slot between the magnets of the first and second magnetic poles on a second side of the flux ring that is diametrically opposed to the first side of the flux ring, the first and second slots having different widths.

14. (previously presented) A stator assembly comprising:
a housing;
a flux ring disposed within the housing, the flux ring having a seam that allows the flux ring to be compressed for insertion into the housing during assembly;
a plurality of permanent magnets disposed around an inner surface of the flux ring, each magnet disposed between at least two anchors extending radially inwardly from an inner surface of the flux ring; and
a material overmolded around the plurality of magnets and the anchors to secure the magnets to the flux ring, to secure the flux ring to the housing by expanding

the flux ring against the housing and to prevent the flux ring from compressing by filling the seam of the flux ring.

15. (original) The stator assembly of claim 14 wherein one of the flux ring and the housing includes at least one projection and the other of the flux ring and the housing includes at least one hole in which the at least one projection is received, the seam of the flux ring aligned with a first magnetic pole of the stator assembly.

16. (original) The stator assembly of claim 15 wherein the projection and hole of the flux ring and housing disposed about ninety degrees from the seam of the flux ring.

17. (original) The stator assembly of claim 15 wherein the projection and hole of the flux ring and housing are aligned with a second magnetic pole of the stator assembly.

18. (original) The stator assembly of claim 14, wherein at least one keying feature is formed in the overmold material between magnetic poles of the stator assembly, the keying feature including slots formed in the overmold material between magnetic poles of the stator assembly when the overmold material is molded with widths of at least two of the slots being different.

19-20 (cancelled)

21. (currently amended) ~~The power tool of claim 20, A power tool~~

comprising:

a housing;

a motor disposed within the housing and having an output coupled to a transmission, the motor having a stator assembly having a flux ring disposed within a stator housing with a plurality of permanent magnets disposed around an inner surface of the flux ring, wherein the flux ring includes including anchors extending radially inward and with each of the plurality of permanent magnets is disposed between at least two of the anchors, and a material overmolded around the plurality of magnets and the anchors to secure the magnets to the flux ring and secure the flux ring to the stator housing.

22. (currently amended) ~~The power tool of claim 20, A power tool~~

comprising:

a housing; and

a motor disposed within the housing and having an output coupled to a transmission, the motor having a stator assembly having a flux ring disposed within a stator housing, a plurality of permanent magnets disposed around an inner surface of the flux ring, and a material overmolded around the plurality of magnets to secure the magnets to the flux ring and secure the flux ring to the stator housing, wherein the flux ring includes including a seam that allows the flux ring to be compressed for insertion into the housing during assembly of the stator assembly, the overmold material expanding the flux ring against the stator housing.

23. (original) The power tool of claim 22 wherein the seam of the flux ring is filled with the overmold material that prevents the flux ring from compressing.

24. (original) The power tool of claim 22 wherein the seam is aligned with a magnetic pole of the stator assembly.

25. (currently amended) The power tool of claim 2022, wherein one of the flux ring and the housing includes at least one projection and the other of the flux ring and the housing includes at least one hole in which the projection is received to align the flux ring in the housing.

26. (original) The power tool of claim 25, wherein the projection and hole of the flux ring and housing are disposed about ninety degrees from the seam of the flux ring.

27. (original) The power tool of claim 25, wherein the stator assembly includes at least one of a rear bearing holder, front bearing holder and fan baffle integrally formed of the overmold material during molding of the overmold material.

28. (original) The power tool of claim 25, wherein the overmold material is a plastic.

29. (currently amended)

~~The power tool of claim 20, A power tool~~

comprising:

a housing; and

a motor disposed within the housing and having an output coupled to a transmission, the motor having a stator assembly having a flux ring disposed within a stator housing, a plurality of permanent magnets disposed around an inner surface of the flux ring, and a material overmolded around the plurality of magnets to secure the magnets to the flux ring and secure the flux ring to the stator housing, and wherein at least one keying feature is formed in the overmold material between magnetic poles of the stator assembly, the keying feature including slots formed in the overmold material between the magnetic poles when the overmold material is molded with widths of at least two of the slots being different.

30-40 (cancelled)

41. (new) The stator assembly of claim 2 further including at least one of a rear bearing support, front bearing support and fan baffle integrally formed of the overmold material during molding of the overmold material.

42. (new) The stator assembly of claim 2 further including a rear bearing support integrally formed of the overmold material during molding of the overmold material, the rear bearing support including a cap having a pocket therein for receiving a rear bearing.

43. (new) The stator assembly of claim 2 wherein the overmold material is plastic.

44. (new) The power tool of claim 21, wherein the stator assembly includes at least one of a rear bearing holder, front bearing holder and fan baffle integrally formed of the overmold material during molding of the overmold material.

45. (new) The power tool of claim 21, wherein the overmold material is a plastic.